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*Indian Standard*  
SPECIFICATION FOR *CHHANA*  
( *First Revision* )

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# *Indian Standard*

## SPECIFICATION FOR CHHANA

### ( First Revision )

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*Indian Standard*  
SPECIFICATION FOR *CHHANA*  
( *First Revision* )

**0. FOREWORD**

**0.1** This Indian Standard ( First Revision ) was adopted by the Indian Standards Institution on 18 June 1980, after the draft finalized by the Dairy Products Sectional Committee had been approved by the Agricultural and Food Products Division Council.

**0.2** *CHHANA* is the indigenous milk product prepared by acid coagulation of milk by heat treatment and subsequent drainage of whey. The coagulants mostly used are sour *CHHANA* whey from a previous run, lactic acid, citric acid and juices of citrus fruits. Cow's milk is usually preferred over buffalo's milk for *CHHANA* production, since cow's milk gives a more desirable body and texture. The colour of *CHHANA* depends on the type of milk used; it is yellowish from cow's milk and whitish from buffalo's milk.

**0.3** *CHHANA* forms an important base for preparation of milk sweets, such as *RASOGOLLA*, *SANDESH* and *PANTOOAH*. *CHHANA* making is one of the important methods adopted for utilizing small amount of surplus milk. This standard is expected to help in exercising the necessary quality control in the manufacture of good *CHHANA* under hygienic conditions.

**0.4** This standard was first published in 1969. In the present revision, additional requirements for protein and ash have been included with a view to ascertaining wholesomeness of the product. Further, the requirement for moisture has been made more stringent.

**0.5** While formulating this standard, necessary consideration has been given to the data collected by the National Dairy Research Institute, Karnal and the relevant rules prescribed by the Government of India, under *Prevention of Food Adulteration Act, 1954*. This standard is subject to restrictions imposed under the Act and the Rules framed thereunder, wherever applicable.

**0.6** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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## **1. SCOPE**

**1.1** This standard prescribes the requirements and the methods of sampling and test for *CHHANA*.

## **2. TERMINOLOGY**

**2.0** For the purpose of this standard, the following definition shall apply.

**2.1** *CHHANA* — The solid product obtained by the acid coagulation of milk which has been subjected to minimum heat treatment equivalent to that of pasteurization followed by subsequent removal of whey. The coagulant used shall be sour *CHHANA* whey, lactic acid or citric acid. *CHHANA* shall not contain any ingredient foreign to milk.

## **3. REQUIREMENT**

**3.1** Only fresh, sweet, clean milk, free from colostrum, and in every way fit for human consumption shall be used. Milk solids† suitably processed may also be used. The milk shall be free from adulterants, preservatives and any matter foreign to milk. The fat percentage of milk shall be such that the final product conforms to the requirements given in Table 1.

**3.2 Appearance and Colour** — The material shall be free from signs of fat or water seepage or both, and mouldiness. The material shall be white to pale yellow. No extraneous colour shall be added.

**3.3 Odour and Flavour** — The material shall have a pleasant curdy flavour. It shall be free from objectionable flavours and odours.

**3.4 Texture and Consistency** — The material shall be of good texture and uniform consistency. It shall be free from coarseness.

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\*Rules for rounding off numerical values (*revised*).

†Subject to the approval by the Central Committee for Food Standards ( *see* **0.5** ).



**3.5** The material shall be manufactured and packed in equipment and premises maintained under hygienic conditions ( *see* IS : 2491-1972\* ). It shall also be stored and distributed under hygienic conditions.

**3.6** The material shall also comply with the requirements specified in Table 1.

**TABLE 1 REQUIREMENTS FOR CHHANA**

Sl No.	CHARACTERISTIC	REQUIREMENT		METHOD OF TEST, REF TO	
		Skim Milk	CHHANA	Appendix	Other Indian Standards
(1)	(2)	(3)	(4)	(5)	(6)
i)	Moisture, percent by mass, <i>Max</i>	60	65	—	Appendix A of IS : 2785-1979*
ii)	Milk fat, percent by mass ( on dry basis ), <i>Min</i>	5 ( <i>Max</i> )	50 ( <i>Min</i> )	—	Appendix B of IS : 2785-1979*
iii)	Protein, percent by mass ( on dry basis ), <i>Min</i>	30	25	—	IS : 7219-1973†
iv)	Ash, percent by mass ( on dry basis ), <i>Max</i>	5.0	5.0	A	—

\*Specification for natural cheese ( hard variety ), processed cheese, processed cheese spread and soft cheese ( *first revision* ).

†Method for determination of protein in foods and feeds.

## 4. PACKING AND MARKING

**4.1 Packing** — All the material used for wrapping or packaging the material shall be of such a nature as to impart no off-flavour or odour, nor in any other way contaminate the product packed under normal conditions of manufacture, storage and use.

\*Code for hygienic conditions for food processing units ( *first revision* ).

**4.2 Marking** — The containers shall be suitably marked as to give the following information:

- a) Name of the product,
- b) Name and address of the manufacturer,
- c) Net mass,
- d) Batch or code number, and
- e) Other requirements according to the standards of *Weights and Measures (Packaged Commodities) Rules, 1977*.

**4.2.1** The containers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

## 5. SAMPLING

**5.1** The method for drawing representative samples of the material and the criteria for conformity shall be as prescribed in Appendix D of IS : 2785-1979\* except that stainless steel knife with a sharp pointed blade shall be used for taking the samples.

## 6. TESTS

**6.1** Tests shall be carried out as prescribed in col 5 and 6 of Table 1.

**6.2 Quality of Reagents** — Unless specified otherwise, pure chemicals and distilled water (see IS : 1070-1977†) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the test results.

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\*Specification for natural cheese (hard variety), processed cheese, processed cheese spread and soft cheese (*first revision*).

†Specification for water for general laboratory use (*second revision*).

## APPENDIX A

[ Table 1, Item ( iv ) ]

## DETERMINATION OF ASH

## A-1. APPARATUS

**A-1.1 Flat Bottom Dish** — of stainless steel, porcelain, silica or platinum.

**A-1.2 Muffle Furnace** — maintained at  $550 \pm 20^\circ\text{C}$ .

**A-1.3 Desiccator**

## A-2. PROCEDURE

**A-2.1** Weigh accurately about 5 g of the material in the tared dish, previously dried in an air-oven. Heat the dish gently on a flame at first and then strongly in muffle furnace at  $550 \pm 20^\circ\text{C}$  till grey ash results. Cool the dish in a desiccator and weigh. Heat the dish again at  $550 \pm 20^\circ\text{C}$  for 30 minutes. Cool the dish in a desiccator and weigh. Repeat this process of heating for 30 minutes, cooling and weighing until the difference between two successive weighings is less than one milligram. Record the lowest mass.

## A-3. CALCULATION

$$\text{A-3.1 Total ash, percent by mass} = \frac{100 (M_2 - M)}{M_1 - M}$$

where

$M_2$  = mass in g of the dish with the ash,

$M$  = mass in g of the empty dish, and

$M_1$  = mass in g of the dish with the material taken for the test.

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# INDIAN STANDARDS

## ON

### DAIRY PRODUCTS

IS:

- 1000-1959 Lactose, commercial
- 1165-1975 Milk powder ( whole and skim ) ( *second revision* )
- 1166-1973 Condensed milk ( *first revision* )
- 1167-1965 Casein ( edible quality ) ( *revised* )
- 1547-1968 Infant milk foods ( *first revision* )
- 1656-1969 Processed cereal weaning foods ( *first revision* )
- 1806-1961 Malted milk food ( *first revision* )
- 2785-1979 Natural cheese ( hard variety ), processed cheese, processed cheese spread and soft cheese ( *first revision* )
- 2802-1964 Ice-cream
- 3922-1966 Recommendations for ghee refinery
- 4079-1967 Canned *RASOGOLLA*
- 4238-1967 Sterilized milk
- 4421-1967 Malted skimmed milk food
- 4709-1968 Flavoured milk
- 4883-1980 *KHOA* ( *first revision* )
- 4884-1968 Sterilized cream
- 5162-1980 *CHHANA* ( *first revision* )
- 5163-1969 Sweet cream butter milk powder
- 5550-1970 *BURFI*
- 5962-1970 Sour partly skimmed milk powder
- 6387-1971 Vegetable protein infant food with milk
- 6397-1971 Code for pasteurization of milk
- 7035-1973 Fermented milk products
- 7607 ( Part I )-1975 Code of practice for keeping dairy accounts: Part I Primary milk collection units
- 7607 ( Part II )-1975 Code of practice for keeping dairy accounts: Part II Market milk plants
- 7607 ( Part III )-1975 Code of practice for keeping dairy accounts: Part III Product plants
- 7839-1975 Dried ice-cream mix

# INTERNATIONAL SYSTEM OF UNITS ( SI UNITS)

## Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

## Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

## Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s <sup>2</sup>
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m <sup>2</sup>
Frequency	hertz	Hz	1 Hz = 1 c/s (s <sup>-1</sup> )
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m <sup>2</sup>

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